

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 25 JUL 2005

WIPO

PCT

Applicant's or agent's file reference BWE327R/RSB		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/051556		International filing date (day/month/year) 20.07.2004	Priority date (day/month/year) 21.07.2003	
International Patent Classification (IPC) or national classification and IPC C08J5/18, C08L25/04, C08J9/00, C08J7/00				
Applicant UNIVERSITA' DEGLI STUDI DI SALERNO et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 09.05.2005		Date of completion of this report 22.07.2005		
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Kiebooms, R Telephone No. +49 89 2399-7816 		

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/051556

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-13 as originally filed

Claims, Numbers

1-9 received on 06.05.2005 with letter of 06.05.2005

Drawings, Sheets

1/7-7/7 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/051556

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-9
	No: Claims	
Inventive step (IS)	Yes: Claims	1-9
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. The amendments conform to Article 19(2) PCT.

2. Reference is made to the following documents:

- D1: IT-B-1 306 004 (UNI DEGLI STUDI DI SALERNO) 23 May 2001 (2001-05-23)
- D2: EP-A-1 217 360 (UNI DEGLI STUDI DI SALERNO) 26 June 2002 (2002-06-26)
- D3: EP-A-1 190 767 (IDEMITSU PETROCHEMICAL CO) 27 March 2002 (2002-03-27)
- D4: RIZZO P ET AL: "Crystalline Orientation in Syndiotactic Cast Films"
MACROMOLECULES, AMERICAN CHEMICAL SOCIETY. EASTON, US, vol.
35, no. 15, 16 July 2002 (2002-07-16), pages 5854-5860, XP002300090 ISSN:
0024-9297

3. The subject-matter of claims 1-9 is new in the sense of Article 33(2) PCT.
D1 discloses a nanoporous material based on syndiotactic polystyrene which has not been obtained from a gel but from a solid material.
D2 discloses only the use of crystalline nanoporous materials as sensing elements.
D3 nor D4 disclose the specific steps of the process of the present application.
4. The subject-matter of claims 1-9 involves an inventive step in the sense of Article 33(3) PCT.

D1 has been selected to represent the most relevant prior art because it relates to the production of nanoporous materials.

The difference between the application and D1 is that in the application a nanoporous and microporous material is obtained from a gel based on syndiotactic homopolymer or copolymers of styrene.

The problem to be solved is that of providing a process for producing polymeric

materials characterized by fast sorption kinetics while maintaining good handiness. Non of the prior art discloses materials which show microporous as well as nanoporous characteristics nor the method of preparing said materials starting from a gel based on syndiotactic homopolymer or copolymers of styrene. The examples of the description and supporting examples show that there is indeed an improved effect regarding sorption properties. Hence, the subject-matter of claim 1-9 involves an inventive step.